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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,609	10/15/2001	Richard Kane Stair	TI-33257	2593

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TEXAS INSTRUMENTS INCORPORATED  
P O BOX 655474, M/S 3999  
DALLAS, TX 75265

EXAMINER

NGUYEN, MINH T

ART UNIT PAPER NUMBER

2816

DATE MAILED: 07/17/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/977,609

Applicant(s)

STAIR ET AL.

Examiner

Minh Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6,9-11,14-19,21-24 and 27-32 is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☒ Claim(s) 7,8,12,13,20,25,26 and 33 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 October 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. The abstract of the disclosure is objected to because the first sentence can be implied.

Correction is required. See MPEP § 608.01(b).

### ***Drawings***

3. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. The drawings are objected to because the boxes 204 and 206 shown in Fig. 7 do not have text labels. A proposed drawing correction or corrected drawings are required in reply to the

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Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Objections***

5. Claims 12-13, 25-26 and 33 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claims, or amend the claims to place the claims in proper dependent form, or rewrite the claims in independent form.

Claim 12 is not further limit the subject matter of claim 1 because the recited second system is not part of the first system which is the subject matter of claim 1, i.e., the second system in combination with the first system of claim 1 is a broader, more encompassing structure, which does not further define the system for extracting a threshold voltage of claim 1.

Claim 13 is not further limit the subject matter of claim 1 because the recited capacitor multiplier system is not part of the system for extracting the threshold voltage which is the subject matter of claim 1, i.e., the capacitor multiplier system in combination with the system of claim 1 is a broader, more encompassing structure which does not further define the system for extracting the threshold voltage of claim 1.

Claim 25 is not further limit the subject matter of claim 16 for the same reason noted in claim 12.

Claim 26 is not further limit the subject matter of claim 16 for the same reason noted in claim 13.

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Claim 33 is not further limit the subject matter of claim 32 because the step of providing a capacitor multiplier circuit is not part of the method for extracting a threshold voltage.

6. Claims 7-8, 12, 20 and 25-26 are objected to because of the following informalities:

In claim 7, line 1, "each of the MOSFETs further comprising" should be changed to -- each of the first and second MOSFETs is --.

In claim 8, line 1, "each of the MOSFET further comprising" should be changed to -- each of the first and second MOSFETs is --.

In claim 12, line 4, "multiple of the threshold voltage" should be changed to -- multiple of the threshold voltage of the first or second system-- to avoid antecedent basis problem since there are three threshold voltages, i.e., the threshold voltage of the first system, the threshold voltage of the second system and the threshold voltage of the stacked system.

In claim 20, line 2, --respectively-- should be inserted after "capacitors" to clearly indicate the first capacitor is in the first part of the voltage divider and the second capacitor is in the second part of the voltage divider.

In claim 25, line 5, "multiple of the threshold voltage" should be changed to -- multiple of the threshold voltage of the first or second system-- to avoid antecedent basis problem since there are three threshold voltages, i.e., the threshold voltage of the first system, the threshold voltage of the second system and the threshold voltage of the stacked system.

In claim 26, line 5, "between an output" should be changed to --between the first input of the first stage and an output --,

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line 8, "the voltage extraction system" should be changed to --the threshold voltage extraction system--,

line 9, "capacitor multiplier" should be changed to -- capacitor multiplier circuit--.

Appropriate correction is required.

***Allowable Subject Matter***

7. Claims 1-6, 9-11, 14-19, 21-24, 27-32 are allowed.

Claims 1-6, 9-11 and 14-15 are allowed because the prior art of record fails to disclose or suggest a system for extracting a threshold voltage which includes a voltage divider connected between the input of the second MOSFET stage and the gate node of the first MOSFET stage, and an intermediate output node connected to the gate node of the second MOSFET stage as recited in claim 1.

Claim 16-19 and 21-24 are allowed for the same reason noted in claim 1.

Claim 27-30 are allowed because the prior art of record fails to disclose or suggest a capacitor multiplier system which includes a threshold voltage extraction system and a capacitor multiplier circuit wherein the capacitor multiplier circuit includes first and second stages and a feedback capacitor connected as recited in claim 27.

Claims 31-32 are allowed for the same reason noted in claim 1.

8. Claims 7-8, 12-13, 20, 25-26 and 33 are allowed after amended to overcome the objections noted above. These claims are allowed for the reasons noted above.

***Conclusion***

9. Since this application is in condition for allowance except for the formal matters discussed above. Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US Patent No. 5,672,960 to Manaresi et al. discloses a threshold extracting circuit (Fig. 5) which includes first and second MOSFETs (M1, M2), voltage divider (B1 and B2) and current sources (OM, IM).

US Patent No. 3,911,296 to Davis discloses a capacitor multiplier circuit (Fig. 3) which includes current source 324, capacitor 302 and transistors 329, 310 and 330.

US Patent No. 5,095,223 to Thomas discloses capacitor multiplier circuit (Fig. 1A) which includes switches and capacitors.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Nguyen whose telephone number is 703-306-9179. The examiner can normally be reached on Monday - Thursday 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 703-308-4876. The fax phone numbers for the

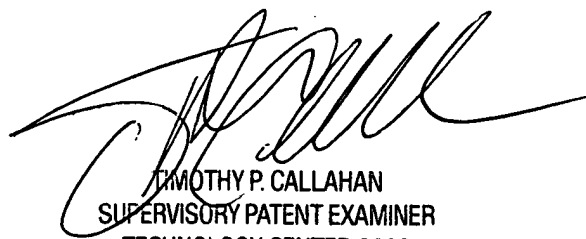
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organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

M

MN  
July 10, 2002



TIMOTHY P. CALLAHAN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800